Pesticide Safety Information Series N
Worker Health and Safety Branch

## N-10 MINIMAL EXPOSURE PESTICIDES In Noncrop Settings

**General Information:**

The Minimal Exposure Pesticide (MEP) list was established to inform users about pesticides with hazards not identified by the well known label signal word system of "DANGER", "WARNING" or "CAUTION". Every pesticide label contains one of these signal words. The use of signal words began many years ago. The U.S. Environmental Protection Agency continued use of the signal words when given authority to regulate pesticides by the U.S. Congress in 1972. Signal words give the user a good idea of the pesticide's ability to cause immediate (acute) illness or injury.

We are learning that some pesticides may cause other kinds of health effects. If exposed to these pesticides, you may not notice any effects for a long time after the exposure. Some of these health effects (like cancer) can be caused by exposure to small amounts of pesticide over a long period of time. Other effects (such as birth defects) may be caused by exposure to very small amounts of pesticide at a critical time. These types of adverse effects are not identified by the signal words on the label. Because of these problems, the Minimal Exposure Pesticide regulations were developed to inform workers about the potential effects of some pesticides.

Some MEP labels will have the signal word "CAUTION" on them. This normally means that a worker handling that particular pesticide might not need to be as careful when handling it. This is not true for MEPs. One may not become sick or injured, at least not right away, from excessive exposure to a pesticide on the MEP list. But, that exposure could be doing damage in your body if handled carelessly.

**Minimal Exposure Pesticides:**

1. Bromoxynil (Buctril®)
   Bromoxynil is a herbicide primarily used to kill weeds in agricultural crops. However, there are some noncrop uses; these include rights-of-way, landscape maintenance, and ornamental turf. In experimental animals, it has been shown to cause birth defects and harmful effects in the pregnant animal. These effects may occur at very low levels of exposure.

2. Oxydemeton-methyl (Metasystox-R)
   Oxydemeton-methyl is an insecticide and miticide used on primarily on fruit, nut and vegetable crops. It too has noncrop uses; these include landscape maintenance and rights-of-way. Oxydemeton-methyl affects an enzyme necessary for proper functioning of the nervous system. Acute poisoning leads to symptoms like headache, nausea, vomiting, weakness and blurred vision. Oxydemeton-methyl caused adverse effects on the male reproductive system at very low levels.

3. Propargite (Omite®, Comite®)
   Propargite is used only in the production of agricultural crops.

Folpet is also listed as an MEP. However, currently the only products registered are paints, coatings and caulkings. These products are exempt from the MEP requirements.

**MEP Use Requirements:**

The MEP regulations apply regardless of the signal word on the label. In addition to following the safety precautions on the label and in California regulations,

your employer must provide the following if you handle MEPs:

- An area with clean towels, soap and water where workers can change clothes and wash at the end of the day
- A clean, pesticide-free place for employees to store personal clothing not in use while handling pesticides
- Clean towels, soap and clean water at the mix/load site for routine or emergency washing
- Clean coveralls (one- or two-piece garment that covers the body except the head, hands and feet); your employer must ensure that you start each work day with clean coveralls
- A closed system for mixing and loading, except for employees who handle a total of one gallon or less per day in original containers of one gallon or less
- Clean full-body, chemical resistant clothing that covers the head, torso, arms, hands, legs and feet
- Appropriate, clean respiratory protection.

**Exemptions And Additional Precautions:**

Oxydemeton-methyl

- Application to ornamental landscape trees and shrubs must be made by trunk injection or soil injection methods only

There are some general exemptions to the MEP requirements for full body protective clothing when using engineering controls. The following table explains those substitutions allowed.

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This leaflet assists readers in understanding pesticide regulations. It is not a legal document. The legal reference can be found in the California Code of Regulations, Title 3. The words "must" and "should" used in the text are not the same. The word "must" means the action is required and comes from California regulations. The word "should" means additional handling practices that are recommended to further reduce exposure.

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**Allowed Substitutions for PPE When Using Engineering Controls**

| When using the following: | Handlers may substitute:* | For the following: |
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| | | |
| Closed system for pesticides with "Danger" or "Warning" | Coveralls, chemical resistant gloves and chemical resistant apron | PPE required on the pesticide labeling |
| Closed system for pesticides with “Caution” | Work clothing | PPE required on the pesticide labeling |
| Closed system under positive pressure | Protective eyewear** | |
| Mixing pesticides in water soluble packets | Use in water soluble packets*** | Use of a closed mixing system |
| Enclosed cab | Work clothing and respiratory protection required | PPE required on the pesticide labeling |
| Enclosed cab acceptable for respiratory protection | Work clothing | PPE required on the pesticide labeling |
| Any pesticide | Chemical resistant suit | Coveralls and a chemical resistant apron |

* For any substitution, all PPE required by the label must be available in case of an emergency

** Protective eyewear is required in addition to coveralls, chemical resistant gloves and apron for pesticides with "Danger" or "Warning" or in addition to work clothing for pesticides with "Caution" on the label

*** Using pesticides in water soluble packets is equivalent to mixing with a closed system. However, transfer from mix tank to application tank must be made with closed transfer equipment.